



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,028	04/06/2001	Paolo Prandoni		6423

7590 05/20/2005

Peter A. Businger, Esq.  
344 Valleyscent Avenue  
Scotch Plains, NJ 07076-1170

EXAMINER

LE, VU

ART UNIT PAPER NUMBER

2613

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/828,028

**Applicant(s)**

PRANDONI ET AL.

**Examiner**

Vu Le

**Art Unit**

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 39-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. claims 39-68 are rejected under 35 U.S.C. 102(a) or (e) as being anticipated by Tamir et al, 5,923,365.

Re claim 39, Tamir discloses a computer method for rendering a stroboscopic representation from images in an original video sequence recorded from a moving camera (fig. 1, Abstract, col.1, line 25-30, col. 6, line 32-38; In Tamir, the video sequence being rendered is from original video sequence obtained from real-time color video input i.e., inherently from moving video camera scanning object(s) in motion – see col. 6, line 50-53), comprising the steps of: *(Note: a stroboscopic representation from images is defined in the specification as a rendered motion trace of a moving object. For the intended purpose of art rejection, it will be interpreted as such)*

(a) selecting representations of at least one distinctive moving feature in the original video sequence at selected different instants of time (col. 8, line 5-10);

(b) forming a synthesized video sequence by superimposing on each image of the original video sequence the selected representations of the feature whose instant of time is anterior to current image time, at their spatial location in the original image taking camera motion into account (fig. 2, col. 8, line 5-10, line 19-35); and

(c) rendering the synthesized video sequence to show the original video sequence with the selected feature leaving a trailing trace of representations along its path at the selected different instants of time (fig. 2, col. 8, line 45-47).

Re claim 40, the method of claim 39, wherein selecting is at a fixed frame interval (col. 13, line 39, i.e. the video clip indicates a fixed frame interval).

Re claim 41, the method of claim 39, wherein selecting is at clocked time intervals (col. 13, line 45-46).

Re claim 42, the method of claim 39, wherein selecting is at specified background locations (col. 12, line 61-65, col. 13, line 33-35, line 44-47).

Re claim 43, the method of claim 39, wherein selecting is at specified moving feature events (col. 7, line 28-31).

Re claim 44, the method of claim 39, wherein selecting comprises accepting input for the feature to be selected (Tamir allows designating criteria for selecting/highlighting foreground objects, col. 7, line 38+, col. 8, line 5+, col. 11, line 10+).

Re claim 45, the method of claim 39, wherein superimposing at their spatial location in the original image comprises using camera movement parameters in recording the original video sequence (col. 6, line 59-65, col. 8, line 5-30, col. 9, line 23-

26; In Tamir, when video input involves live video of a sport event, tracking of object(s) in motion would have inherently necessitated keeping track of camera movements during scanning. For example, pan/tilt are indicative of camera movements).

Re claim 46, the method of claim 45, wherein the camera movement parameters have been obtained by camera motion sensors (See discussion of claim 45 above. The inherent pan/tilt operations of video camera during live video event are suitable as motion sensors).

Re claim 47, the method of claim 39, wherein superimposing comprises blending (col. 7, line 54).

Re claim 48, the method of claim 39, wherein rendering comprises controlling persistency of representation of the feature in the synthesized video sequence (col. 8, line 5-10, col. 10, line 28-34; In Tamir, constantly highlighting and tracking of object(s) in motion in a synthesized background are indicative of maintaining persistency of representation).

Re claim 49, the method of claim 48, wherein controlling is for older representations of the feature as a function of time to appear increasingly transparent (col. 11, line 16-29; In Tamir, a caption appropriate to the object which travels continuously along therefore would fall in the category as claimed).

Re claim 50, the method of claim 39, wherein the original video sequence is of a sports event (Abstract, col. 6, line 42-46).

Re claim 51, the method of claim 50, wherein the feature comprises a ball (col. 10, line 27-29).

Re claim 52, a system for rendering a stroboscopic representation from images in an original video sequence recorded from a moving camera, comprising means for effecting the method of claim 39. (See fig. 1 and corresponding disclosure).

Re claim 53, a system for rendering a stroboscopic representation from images in an original video sequence recorded from a moving camera, the system being instructed for effecting the method of claim 39. (See fig. 1 and corresponding disclosure).

Re claim 54, Tamir discloses a computer method for rendering a stroboscopic representation from images in an original video sequence recorded from a moving camera (fig. 1, Abstract, col.1, line 25-30, col. 6, line 32-38; In Tamir, the video sequence being rendered is from original video sequence obtained from real-time color video input i.e., inherently from moving video camera scanning object(s) in motion – see col. 6, line 50-53) , comprising the steps of:

(a) selecting representations of at least one distinctive moving feature in the original video sequence at selected different instants of time (col. 8, line 5-10);

(b) forming a background video sequence by removing representations of moving objects from the images of the original video sequence (fig. 5A: 370 & 380, col. 3, line 12-15, col. 12, line 46-55);

(c) forming a synthesized video sequence by superimposing on each image of the background video sequence the selected representations of the feature, at their spatial location in the original image taking camera motion into account (col. 11, line 45-55, col. 13, line 32-63); and

(d) rendering the synthesized video sequence to show the selected representations as frozen against the background at the selected different instants of time (col. 11, line 45-55, col. 13, line 32-63).

Re claim 55, see claim 40.

Re claim 56, see claim 41.

Re claim 57, see claim 42.

Re claim 58, see claim 43.

Re claim 59, see claim 44.

Re claim 60, see claims 45-46.

Re claim 61, see claims 45-46.

Re claim 62, see claim 47.

Re claim 63, see claim 48.

Re claim 64, see claim 49.

Re claim 65, see claim 50.

Re claim 66, the method of claim 65, wherein the feature comprises an ice skater. (Tamir discloses highlighting and tracking an object of interest in a sport event. Hence, Tamir inherently would apply to ice skating as a sport event, and tracking an ice skater as an object of interest in the sport event).

Re claims 67, see claim 52.

Re claim 68, see claim 53.

***Response To Remarks***

Applicant contends the present invention as claimed pertains to rendering of stroboscopic representations that is against the original video sequence. In contrast, Tamir's registering is on a global image. Examiner respectfully disagrees.

In Tamir, rendering is against the original video sequence. Nothing indicates that it is not. Even for the "global" wide field of view mosaic background, that too is derived from "local" narrow field of view background obtained from original image sequence. In fact, applicant's disclosure involves such global synthesis to provide wide field of view to "encompass the entire course of the foreground movements" (para 0029).

Hence, applicant's argument is not persuasive.

***Conclusion***

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



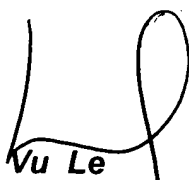
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### **Contact**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is (571) 272-7332. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. Customer Service can be reached at (571) 272-2600. The fax number for the organization where this application or proceeding is assigned is (571) 273-7332.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Vu Le**  
Primary Examiner  
AU 2613  
(571) 272-7332  
Vu.Le@uspto.gov